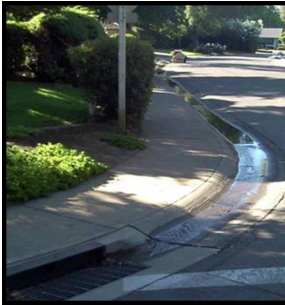




WHY DOES IT MATTER?

Study seeks to find out: *what's in that water?*

Do yours or your neighbor's sprinklers ever overspray onto the sidewalk? Have you ever wondered where that water goes? For most of us that water runs off our property to a storm drain that leads to a local pond, stream, river or the ocean. So,



what's the big deal? A study being done simultaneously in northern and southern California at a total of 8 sites is looking for the answer to that question.

Four single-family home neighborhoods in Sacramento County and four comparable neighborhoods in Orange County have been the focus of this study. Since 2006, the water that runs off from these sites after storms or over-watering has

been collected at the point where it enters the waterways and analyzed for bacteria, excess fertilizer components, and eleven different pesticides.

Master Gardeners have implemented the second component of the study: measuring the effectiveness of education on the amount and contents of run-off from neighborhoods. Outreach events in 2 neighborhoods



in each county promote landscape practices that reduce water, fertilizer, and pesticide use with the aim of reducing polluted run-off. The other 2 neighborhoods in each county are being used as controls.

RESULTS

What's in the water?

Pesticides

Surveys show that more than 60% of the pesticides that consumers purchase are used to control ants around their homes. Additionally, many people still have products on their garage shelf that are no longer available for



purchase because of their harmful effects. Eleven pest control products were found in the water samples virtually year round at all sites, including those products no longer commercially available.

Fertilizers

The main ingredients of lawn and garden fertilizers were found in the water samples at all sites. The pattern of the spikes in concentration of these nutrients suggested that overwatering or heavy rain events followed application of the fertilizer, carrying the excess to the adjacent waterways.

IMPACT

What does it mean?

Upsetting the balance

Whenever an unnatural chemical is present in a natural water system, it can upset the balance of all the inter-dependent living organisms that are part of or contribute to that system. Pesticides can kill non-target wildlife which may be an important part of another animal's food chain. Fertilizers can cause some water plants to proliferate and use up the oxygen needed by fish and other water organisms to survive. When this balance breaks down, it degrades the health and beauty of the rivers, lakes and oceans we love and enjoy.

What can you do?

Best Management Practices

If the majority of the homes in a given neighborhood could adjust their gardening practices to prevent run-off from their property, the integrity of the natural ecosystems in their area could more easily be preserved. The outreach in this study aims to acquaint the public with the resources available to help them or their landscape professional more carefully and efficiently manage their own yard.



Efficient Gardening Practices

If protecting your local nature areas also meant you could *save money, energy and time* spent on gardening, wouldn't you want to know how? Here are some examples of topics your local Master Gardeners have used to show test-site homeowners how!



Landscape design

Contouring sloping areas of a yard to collect excess water and using mulch can prevent run-off and take advantage of rain.

Pest Control

Ant baits and traps are economical and efficient methods of control, and unlike sprays, the chemicals are not carried off-site by sprinkler water where they are wasted and pose a contamination threat to our waterways.



Other Pests

should only be treated chemically when they reach critical levels, and label directions should be carefully followed. Never apply chemicals when rain is forecast.

Sprinklers

Replacing inefficient sprinkler heads with low-flow rotator heads can drastically reduce the amount of wasted water, because the lower



volume delivery allows the water to penetrate the soil instead of running off to drains.

Lawn Watering

Installing and properly setting irrigation controllers, and adjusting sprinkler heads to spray only on planted areas can save time and money as well as reduce run-off.

Fertilizing

Lawns and gardens should be fertilized only when they are actively growing. Excess granular types should be swept onto lawns or beds to reduce waste and run-off to drains.





Check out these websites for more information:

 **California Statewide Master Gardeners Program:**

<http://camastergardeners.ucdavis.edu>

 **UC Guide to Healthy Lawns**

<http://www.ipm.ucdavis.edu/TOOLS/TURF/index.html>

 **Water Conservation Tips for the Home Lawn and Garden:**

<http://anrcatalog.ucdavis.edu/LawnsLandscape/8036.aspx>

 **Lawn Watering Guide for California:**

<Http://anrcatalog.ucdavis.edu/LawnsLandscape/8044.asp>

 **Choosing a Landscape Professional for your River-Friendly Garden:**

<http://www.sacramentostormwater.org/SSQP/Riverfriendly/Documents/ChoosingLandscapePro.pdf>

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